A beginner's guide to open innovation

Bogers, Marcel

Published in:
Global Innovation Magazine

Publication date:
2014

Document version
Final published version

Citation for pulished version (APA):
Bogers, M. (2014). A beginner's guide to open innovation. Global Innovation Magazine, 1(2), 4-8.

OPEN INNOVATION

A BEGINNERS GUIDE TO OPEN INNOVATION

Marcel Bogers of the University of Southern Denmark presents a beginner's guide to open innovation.

"No matter who you are, most of the smartest people work for someone else," Bill Joy, co-founder of Sun Microsystem, reportedly said to highlight that no single company has the monopoly on knowledge for innovation.1 This principle, also known as *'Joy's Law'*, is at the centre of open innovation, an emerging paradigm for understanding how companies innovate.

Back in 2003, Henry Chesbrough coined the term open innovation to refer to "a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology".2 He originally proposed a number of 'erosion factors' that undercut the logic of the earlier *'closed innovation'* model of research and development *(R&D)*, namely increased mobility of workers, more capable universities, declining US hegemony, and growing access of startup firms to venture capital. To this, we can add yet another erosion factor that allows firms to leverage distributed knowledge sources, namely the rise of the internet and the related increase in use of social media, which have opened up knowledge access and sharing capabilities, internal ICT networks to the World Wide Web.3

Open innovation has been receiving an increasing amount of attention, both in academic research and in industrial practice. On the academic side, there are currently, according to Google Scholar, more than 7,000 citations of academic work to Chesbrough's original book, which was published more than a decade ago.

Accordingly, academic and practitioner journals have shown an increasing interest in open innovation, as reflected by the increasing amount of publications on the subject, including inclusion in special issues that are organised around the concept. There are also an increasing number of books that address various aspects of open innovation. The academic scholarship has moreover been supplemented by a favourable response of industry to the open innovation concept. For example, job titles like Manager or Director or Vice President of open innovation are becoming more increasingly common, and many consulting firms now feature an open innovation practice area in their work. More generally, while a Google search on the term open innovation yielded roughly 200 page links before 2003, the millions of page links that Google now reports in response to the term suggest a widespread use of this concept.

Given the increasing use of open innovation, the world is already filled with examples of organisations that have implemented it as part of their operations and strategies. For example, a company like Philips, which wants to become a leader in health and well-being, relies on external partners to achieve this ambition. The company's website states: "That is why we actively pursue what we call open innovation-sharing our expertise and technical abilities with universities, institutes, and other companies so that, together, we can realise the very best ideas. We engage in two kinds of open innovation. Through 'inside-out' innovation, we make our skills and resources available to the outside world. For example, we regularly undertake contract research for external parties, provide technical facilities and support, and assist with IP licensing. Through 'outside-in' innovation, we draw on the capacities of individuals, organisations, and even small start-ups from around the globe. By providing a broader window

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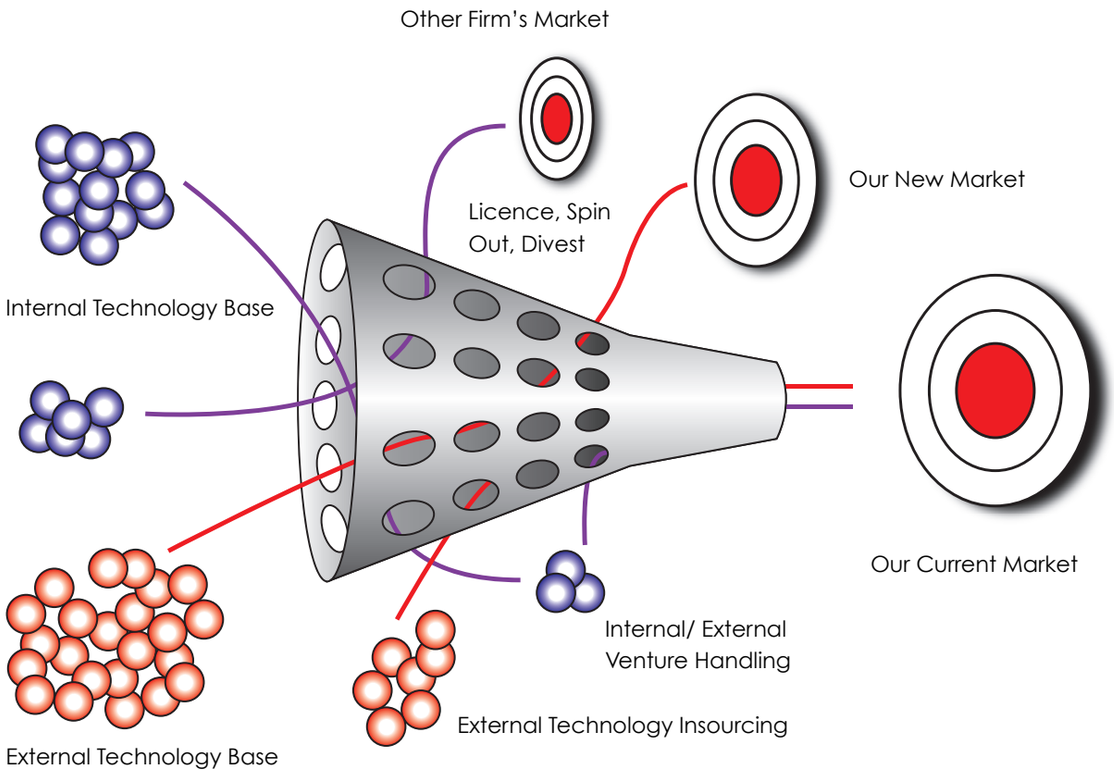
on the world of health and well-being, these strategic partners help us gain new insights and access to new technologies." Another example is Procter & Gamble *(P&G)*, which embraces open innovation through its Connect + Develop programme: The website for the programme states: "Today, open innovation at P&G works both ways - inbound and outbound - and encompasses everything from trademarks to packaging, marketing models to engineering, and business services to design. It's so much more than technology." P&G thus also emphasises the importance of open innovation beyond only R&D, as illustrated in the updated model below.



1 http://en.wikipedia.org/wiki/Joy's_Law_(management)/ (Accessed: December 9, 2013)

2 Chesbrough, H. 2003. Open Innovation: The New Imperative for Creating and Profiting from Technology. Boston, MA: Harvard Business School Press, p. xxiv.

3 Chesbrough, H., & Bogers, M. 2014. Explicating open innovation: Clarifying an emerging paradigm for understanding innovation. In H. Chesbrough, W. Vanhaverbeke, & J. West (Eds.), Open Innovation: New Frontiers and Applications. Oxford: Oxford University Press.

As highlighted by Philips and P&G, there are different types of open innovation. Essentially, outside-in *(inbound)* open innovation refers to the purposive management of knowledge flows from outside stakeholders into the firm, while inside-out (outbound) open innovation refers to reverse flows from the firm to the outside. Besides, coupled open innovation implies combined knowledge inflows and outflows between inside and outside stakeholders in the innovation process. The table below gives a description of these different types and some mechanisms on how to manage them. Taken together, open innovation can be defined as a distributed innovation process based on purposively managed knowledge flows across organisational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organisation's business model.4

OPEN INNOVATION TYPES AND MECHANISMS

OPEN INNOVATION TYPE	DESCRIPTION	MECHANISMS
OUTSIDE-IN (INBOUND)	Involves opening up a company's own innovation processes to many kinds of external inputs and contributions.	-Inlicensing intellectual property -Scouting -Crowdsourcing -Intermediaries -Competitions and tournaments -Communities
INSIDE-OUT (OUTBOUND)	Involves allowing unused and under-utilised ideas and assets to go outside the organisation for others to use in their businesses and business models.	-Outlicensing intellectual property and technology -Donating intellectual property and technology -Spin-outs -Corporate venture capital -Corporate incubators.
COUPLED	Involves combining purposive inflows and outflows of knowledge to collaboratively develop and/or commercialise an innovation.	-Strategic alliances -Joint ventures -Consortia -Networks -Ecosystems -Innovation platforms.

Adapted from Chesbrough and Bogers *(2014).*

Most research and practice in the domain of open innovation has focused on the outside-in type, with obtaining, integrating and commercialising as phases of the inbound open innovation process.5 And while there is an increasing amount of insight in how to obtain knowledge from external sources, it remains quite poorly understood how to exactly integrate and commercialise this external knowledge. Internal capabilities, practices and culture appear to play an important role, also because they are among the factors that lead to failure in open innovation.

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4 Chesbrough, H., & Bogers, M. 2014. Explicating open innovation: Clarifying an emerging paradigm for understanding innovation. In H. Chesbrough, W. Vanhaverbeke, & J. West (Eds.), Open Innovation: New Frontiers and Applications. Oxford: Oxford University Press.

5 West, J., & Bogers, M. 2014. Leveraging external sources of innovation: A review of research on open innovation. Journal of Product Innovation Management, 31 (4):814831. Available at: http://ssrn.com/abstract=2195675.